

109,676

PATENT



SPECIFICATION

Application Date, Oct. 7, 1916. No. 14,270/16.

Complete Left, Apr. 10, 1917.

Complete Accepted, Sept. 27, 1917.

PROVISIONAL SPECIFICATION.

Improvements in Sack-holders.

I, JOHN WESTWOOD SALMOND, of Old Leeds Street, Liverpool, Cotton Bag Manufacturer, do hereby declare the nature of this invention to be as follows:—

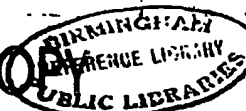
This invention has for its object a contrivance to hold up an empty bag or sack with the mouth open or distended ready for filling. The contrivance has been specially designed for holding the mouth of a bag open while a plurality of empty sacks are packed thereinto, but it can be used equally well for holding the mouth of a bag open whilst being filled with grain, seeds, flour or other materials or articles of merchandise.

The invention comprises a hopper or chute of approximately rectangular shape in cross section with rounded corners and parallel sides, or of other suitable shape, and of such dimensions that the open mouth of the bag will fit on to the outside of it, so that the mouth of the empty bag is held distended while being filled. This hopper or chute is arranged to be expansible or contractible, that is to say it can be contracted to such dimensions as will enable the mouth of the bag to be easily placed round it and then expanded, so as to forcibly distend the bag's mouth and hold it by surface contact. This expansibility and contractibility is provided for by making the hopper in two halves or segments, with the sides of one half overlapping the side walls of the other half so that collectively these two halves or segments form a complete hopper or chute. The rear half is fixedly supported by a suitable frame, while the forward half is slidably supported, so that it can be moved horizontally forwardly or rearwardly by means of a rotary screwed spindle passing through a nut on a supporting member, and by turning this screwed spindle one way by means of a handle, the hopper or chute is contracted, or by turning it the other way the hopper or chute is expanded.

In the preferred construction, I provide a suitable platform at a suitable height from the ground. At the forward end, this platform has a pair of horns, to the underside of which (or to the platform) the rearward part of the hopper is fixedly secured, and the forward part of the hopper is slidably mounted on the underside of these horns (or in guides secured thereto), in such manner as to be capable of being slid forwardly or rearwardly, that is to say the forward part of the hopper is slidable longitudinally of the platform. From the horns there also projects forwardly a U-shaped frame member, the side arms of which are fixedly secured to the horns or platform and between which the forward part of the hopper is located. The cross piece of this U-shaped member carries a nut through which passes the screwed spindle

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aforesaid, whose rearward end is coupled to the forward part of the hopper while the forward end is provided with a handle, so that by turning the handle the forward part of the hopper is moved rearwardly or forwardly to contract or expand the hopper as required.

In use the hopper is contracted by turning the handle one way, and the open mouth of the bag is placed round the outside of the hopper, and then the handle is turned so as to expand the hopper and cause it to bind against the open mouth of the bag to hold the bag suspended at a suitable height from the ground. To prevent any possibility of the bag accidentally slipping off the hopper, the latter may be provided on the outside with laterally projecting lips or flanges; so that the material of the bag where these lips impact against it, becomes off-set from the general plane of the bag, thus causing the bag to become interlocked with the hopper or chute. The empty sacks folded in a bundle of say two hundred and fifty (more or less) are now inserted from the platform into the empty bag and pressed down thereinto. The filled bag is then released, by turning the handle or the pressing down of the bundle into the bag, and the weight of the bundle may be sufficient to force the filled bag from off the hopper so that it falls down on to the floor. Another bag is then affixed in position, and the operation is repeated. I prefer to make the thread of the screw spindle a steep one, so that only a comparatively small movement of the handle is required to expand or contract the hopper, or if desired the screwed spindle may be operated by a treadle, or other means may be provided for imparting to the forward segment of the hopper a sliding movement. In thus describing the apparatus, I do not confine myself to the precise details of construction as these may be varied without departing from the nature of the invention, an important feature of which is making the hopper or chute adjustable in size by making it in two parts, one of which is capable of a sliding movement with respect to the other.

Dated this 6th day of October, 1916.

For the Applicant.

W. P. THOMPSON & Co.,
6, Lord Street, Liverpool.

COMPLETE SPECIFICATION.

Improvements in Sack-holders.

I, JOHN WESTWOOD SALMOND, of Old Leeds Street, Liverpool, Cotton Bag Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention has reference to apparatus for holding a bag or sack open or distended at the mouth whilst it is being filled, such apparatus being of the type comprising a hopper or chute made expansible and contractible so that when contracted the open mouth of the sack can easily be placed round it and when expanded will forcibly distend the sack's mouth and hold it by surface contact.

Prior to this invention it has been proposed to make the hopper in two portions, one portion being so pivoted, that the discharge end of the hopper can be contracted to allow the mouth of the sack being drawn over it, the sack being secured in this position when being filled by the effort of the discharge end to distend to its original position.

Now according to the present improvement, one portion of the hopper is

slidably supported (instead of being hingedly supported) and can be moved horizontally forwardly and rearwardly by means of a rotary screwed spindle passing through a nut in a supporting member, so as to expand the hopper and hold the sack firmly thereon during the filling operation or to contract the same to receive the mouth of an empty sack.

The invention will be understood from the following description reference being had to the accompanying drawings, in which:—

Figure 1 is a side view of the sack holder,

Figure 2 is a plan view thereof,

10 Figure 3 is a cross sectional detail view on a larger scale.

Referring to these drawings, A is a suitable platform at a convenient height from the ground supported by the upright frame B. At the forward end, this platform has a pair of horns C. D E is the expansible or contractible hopper open at top and bottom so as to form a chute, the rearward part D of which is 15 fixedly secured to the frame B and the forward part E of the hopper is slidably mounted at the underside of these horns C in such manner as to be capable of being slid forwardly or rearwardly, that is to say the forward part E of the hopper is slidable longitudinally of the platform A so as to expand or contract the hopper. Below the horns C there projects forwardly a U-shaped frame 20 member F the side arms of which are fixedly secured to the supporting frame B of the platform A and between which arms the rearward and forward parts D E of the hopper are located. The cross piece / of this U-shaped member F carries a nut G through which passes the screwed spindle H whose rearward end is coupled at I to the forward part E of the hopper while the forward end of the spindle is provided with a handle such as J, so that by turning the handle 25 the forward part E of the hopper is moved rearwardly or forwardly relatively to the rearward part D to contract or expand the hopper as required and the slidable part of the hopper is held locked with respect to the rearward part by means of the screwed spindle. The side arms of the U-shaped member F may 30 be made in two parts adjustably bolted together at K if desired. The member F may be made angular in cross section. The forward part E of the hopper may at its upper part at the front be formed with a coaming e which acts as a shield to prevent material thrown into the hopper from the platform from overflowing the front edge.

15 The rearward or fixed part D of the hopper is shewn provided with an outward flange L at its upper edge. This rests upon bars M angular in cross section which are secured to the underside of the platform A and project forwardly so that the flanged top edge L of the rearward part D of the hopper is supported thereby. The upper edge of the forward part E of the hopper 0 is also flanged outwardly as shewn at N and this flange rests in a slidable manner on the flange L.

In use the hopper is contracted by turning the handle J one way and the open mouth of the bag is placed round the outside of the hopper D E, and then the handle is turned so as to expand the hopper and cause it to bind 5 against the open mouth of the bag to hold the bag suspended at a suitable height from the ground. To prevent any possibility of the bag accidentally slipping off the hopper D E, the latter may be provided on the outside with laterally projecting lips or flanges O, so that the material of the bag where these lips impact against it, becomes off-set from the general plane of the 10 bag, thus causing the bag to become interlocked with the hopper or chute. The empty sacks folded in a bundle of say two hundred and fifty (more or less) are now inserted from the platform A into the empty bag and pressed down thereinto. The filled bag is then released, by turning the handle J or the pressing down of the bundle into the bag, and the weight of the bundle may be sufficient to force the filled bag from off the hopper so that it falls down 15 on to the floor. Another bag is then affixed in position, and the operation is repeated. I prefer to make the thread of the screwed spindle H a steep one, so

that only a comparatively small movement of the handle J is required to expand or contract the hopper D. E, or if desired the screwed spindle may be operated by a treadle, or other means may be provided for imparting to the forward segment of the hopper a sliding movement.

The contrivance has been specially designed for holding the mouth of a bag open while a plurality of empty sacks are packed thereinto, but it can be used equally well for holding the mouth of a bag open whilst being filled with grain, seeds, flour or other materials or articles of merchandise.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a device for filling bags and sacks, a hopper made in two portions, one portion being fixedly supported and the other slidably supported in such manner that it can be moved horizontally forwardly and rearwardly by means of a rotary screwed spindle passing through a nut in a supporting member, whereby the hopper can be expanded to hold the sack thereon during the filling operation or contracted to receive the mouth of an empty sack.

2. A contrivance to hold a bag or sack with the mouth open or distended ready for filling, comprising an elevated platform supported by a frame, a hopper made in two parts or segments one of which is supported by and fixed to the frame and the other slidably supported on the fixed part of the hopper, a frame member within which the hopper is located and which projects forwardly of the hopper and a rotary screwed spindle passing through a nut in this frame member and coupled to the slidable part of the hopper, so that by turning the screwed spindle the hopper is expanded or contracted.

3. The contrivance to hold a bag or sack with the mouth open or distended ready for filling, constructed and arranged substantially as hereinbefore described with reference to the drawings annexed.

Dated this 7th day of April, 1917.

For the Applicant,

W. P. THOMPSON & Co.,
6, Lord Street, Liverpool, and at
Bradford & London,
Chartered Patent Agents.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1917.

[This Drawing is a reproduction of the Original on a reduced scale.]

